

Storm Water Quality

Did you know we all live on a lake or stream? It's true - We might not be able to see it from our window, but it's there. It might be a small stream, ditch or even the storm drain in the street, yet all of these lead to a river or lake. Why is this important to you? Remember that what we do at home affects our rivers and lakes!

In Macomb Township our water resources are one of the most important assets to our community. Various creeks, streams, drains, and ditches stretch across our Township boundaries and carry water to the Clinton and St. Clair Rivers, and Anchor Bay and Lake Huron. Protection of these water resources is essential to the public health, quality of life and economic well being of all that live in the Metropolitan Detroit area.

Storm water is not cleaned before it empties into our waterways. This means that fertilizers, pet wastes, used oil/ antifreeze, plus other wastes run off from lawns, driveways, and parking lots enter untreated into our waterways. These items go straight into our local fish habitat, swimming areas and drinking water. But there are things individuals can do to reduce this problem. Small changes in our habits can make a big difference.

The Township, along with 170 other Southeast Michigan communities and agencies, are following a storm water permit process, which requires various activities to be undertaken to improve our storm water. To better understand this process an understanding of some simple terms are needed.

What is a Watershed?

A watershed consists of all the land and waterways that drain into the same body of water. Understanding how water travels across the ground surface or other intercepting feature (tree, house, parking lot) and reaches a storm drain or stream is a critical component of watershed management. Water flows on a downward path to its eventual river and lake destination before it again moves into different phases of the hydrologic, or circulation, cycle.

What is a Sub watershed?

A subwatershed is a smaller basin of a larger drainage area that all drains to a central point of the larger watershed.

What is Storm Water?

Storm water is the rainfall/ snowmelt that flows over our yards, streets, parking lots, and buildings and either enters the storm drain system or runs directly into a lake or stream.

What is a Storm Drain versus a Sanitary Sewer?

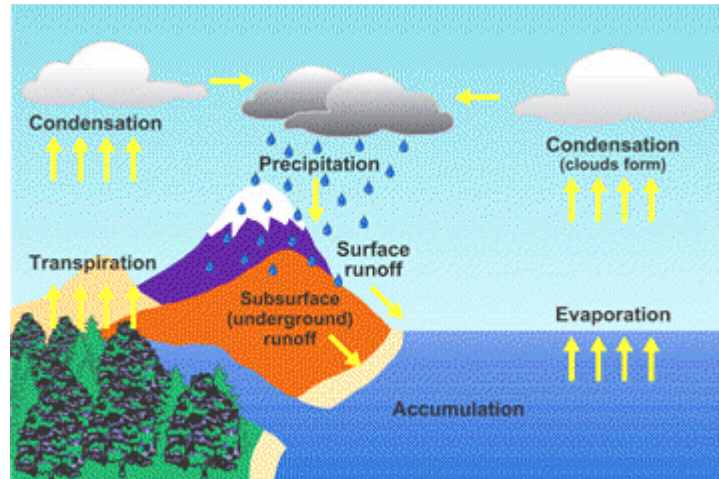
Storm drains are the openings you see along curbs, in streets and parking lots. They carry away rainwater and snowmelt and transport it through to nearby lakes and streams. Water and other debris that enter storm drains do not go to a treatment facility. A sanitary sewer takes household water and waste from toilets, sinks and

showers, and transports it to a wastewater treatment facility. There, the water is treated and discharged back to a lake or stream.

What is the Water Cycle and How Does It Work? (see attached summary)

The Water Cycle

How Does It Work?



The earth has a limited amount of water. That water keeps going around and around and around and around and around and around and (***well, you get the idea***) in what we call the "Water Cycle".

This cycle is made up of a few main parts:

- evaporation (and transpiration)
- condensation
- precipitation
- collection

Evaporation is when the sun heats up water in rivers or lakes or the ocean and turns it into vapor or steam. The water vapor or steam leaves the river, lake or ocean and goes into the air.

Water vapor in the air gets cold and changes back into liquid, forming clouds. This is called **condensation**.

Precipitation occurs when so much water has condensed that the air cannot hold it anymore. The clouds get heavy and water falls back to the earth in the form of rain, hail, sleet or snow.

Collection occurs when water falls back to earth as precipitation, it may fall back in the oceans, lakes or rivers or it may end up on land. When it ends up on land, it will either soak into the earth and become part of the "ground water" that plants and animals use to drink or it may run over the soil and collect in the oceans, lakes or rivers where the cycle starts **all over again**.

How Does Storm Water Get Polluted?

As storm water flows over our lawns and driveways, it picks up fertilizers, oil, chemicals, sediments, grass clippings, litter, pet waste, and anything else in its path. The storm drain system then transports these pollutants, now in the water, to local lakes and streams. Anything that goes into a storm drain eventually ends up in a lake or stream.

What Is Polluting Our Storm Water?

Pollutants from the roadways, lawns, construction sites, and carelessly discarded trash, (cigarette butts, paper wrappers, and plastic bottles, etc.), when deposited into nearby storm water sewers can impair the waterways, thereby discouraging recreational use, contaminating drinking water supplies, and interfering with habitat for fish and wildlife.

What Can I Do About Storm Water Pollution?

Storm water pollution is caused by the daily activities of people everywhere. Practice healthy habits will help to keep common pollutants off the ground and out of storm water. Visit web sites, which contain valuable information and programs activities for water quality.

How Can You Help Improve The Water Quality In Your Area?

- Increase Your Awareness
- Increase Your Activity
- Change Your Habits

More visit these web sites:

- Clinton River Watershed Council
www.crwc.org
- Southeast Michigan Council of Governments
<http://www.semcog.org/OursToProtect/OurstoProtect.htm>
- Michigan Department of Environmental Quality
www.michigan.gov/deq
- St. Clair County Health Department
http://www.stclaircounty.org/offices/health/storm_water.asp